Administrator's Mission to Greater China
12 December, 2013
Hong Kong, SAR, China

Meeting with Hong Kong Environment Bureau

Purpose:

You are meeting with the Environment Bureau Undersecretary to Confirm/Announce agreement to collaborate with the Bureau's Environmental Protection Department on three priority initiatives that include:

- Regional air quality management;
- Emerging air monitoring and measurement techniques;
- Marine vessel emissions reductions and co-hosting the 2014 Pacific Ports Sustainability Collaborative.

We hope this will be the beginning of a more sustained level of cooperation with Hong Kong Environmental Protection Department (HKEPD) that will expand to support Pearl River Delta regional environmental capacity. You will also discuss sustainable transport in general.

Key Message: EPA welcomes Hong Kong Environmental Bureau's commitment to collaborate to achieve environmental benefits for both Hong Kong and the U.S. through the three initial topics for collaboration.

[redacted] [Exemption 5]

Overview & Key Issues: EPA and Hong Kong Environment Bureau and its Environmental Protection Department (HKEPD) have been exchanging expertise on air quality, marine vessel emissions reduction strategies, and other regional air quality efforts informally over the last few years. In October 2011, EPA and HKEPD signed a Statement of Intent that builds on this ad hoc cooperation and lays out five categories of work that are based on mutual priorities: (1) environmental information, law, and enforcement capacity building, (2) air quality protection, (3) water quality protection, (4) sustainability (referring to sustainable communities), and (5) waste management. Although the agreement was signed in 2011, very little work has been completed as Hong Kong backed off its commitment to fund the programming. In advance of your visit, however, Hong Kong has now agreed to support some joint activities (workshops and regional meetings) to advance some initial work and to continue a dialogue on sustainable transport in general.

This meeting is an opportunity to thank the Environment Bureau and HKEPD for their commitment to collaborate and to note our interest in this initial work leading to additional regional cooperation with HKEPD. This will also be an opportunity for a conversation related to sustainable transport challenges and opportunities.

Counterparts:

- (TBC) Kam Sing (KS) Wong, may join to welcome you before your meeting with the Undersecretary
- Hong Kong Secretary for the Environment
- Christine Loh, Hong Kong Undersecretary for the Environment
- Others TBD

EPA/USG Attendees:

- EPA Delegation
- Deputy Public Affairs Officer Scott Robinson (U.S. Consulate Spokesman)
- Economic Officer Derek Wong
- Consular Officer Christina Hansell (Tina previously served as ESTH Officer in Embassy Moscow, and will be the official note taker for the bilateral meeting)

Agenda Summary:

12:30-1:45pm Bilateral working lunch (Gov VIP Lounge)

- Presentation by HK Airport Authority
- Presentation by HK EPD
- Key points by Administrator McCarthy
- Discussion—to acknowledge agreement to collaborate on the three key areas and have a broad discussion on sustainable transport

Background

U.S. EPA and Hong Kong EPD signed a Statement of Intent (SOI) for cooperation in 2011. However, since that time little work has been implemented due to administrative problems with Hong Kong's funding of the cooperation. The original SOI covered air quality and water quality protection, waste management, enforcement and environmental information. HK Environment Bureau Undersecretary Christine Loh, a forceful advocate of EPA-EPD cooperation, has used your visit to gain the needed momentum to restart our cooperation. Hong Kong EPD has agreed to support three initial areas of cooperation with EPA:

1. A regional workshop series on regional air quality. [redacted]
2. Collaboration on emerging air modeling and measurement technologies; and [Exemption 5]
3. Collaboration on marine vessel emissions and hosting a marine vessels workshop/meeting with EPA and the international Pacific Ports Clean Air/Sustainability Collaborative.

[redacted] [Exemption 5]

[All redactions on this page are based on Exemption 5]

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As we will be meeting at Hong Kong International Airport and sustainable transportation is a key priority for HKEPB, we will have a discussion on sustainable transportation issues.
The sustainable ports and marine goods movement will be a particular area of focus for this meeting as it is a top priority for HKEPD and Undersecretary Loh. Marine vessels travelling to/from Hong Kong (HK) port and along the Pearl River Delta (PRD) are estimated to contribute 50% to Hong Kong's total air emissions. The Hong Kong Environmental Protection Department (EPD) has adopted voluntary vessel emission reduction initiatives over the past 5 years and now wants to promote an emission control area in the Pearl River Delta. [redacted]

[redacted]

Hong Kong and EPA (OITA + Regions 9 and 10) have exchanged expertise and experience over the last several years. [redacted] Such practices would benefit both China and the U.S. environment and advance sustainability of marine movement of goods. In addition, the 2014 marine vessels forum will be timed and coordinated with HKEPD's biennial MoVE (Motor Vehicle Emissions Control) forum in late 2014 and include expert participation from a broad set of stakeholders in marine transport from the Pacific Rim and the world.

EPA co-founded the Pacific Ports Clean Air Collaborative (now the Pacific Ports Sustainability Collaborative) with the Ports of Los Angeles, Shanghai, and the US Maritime Administration in 2006. It is a resource that brings experts from all stakeholders in marine transport to share experience, expertise, needs, technologies and lessons learned among Pacific Rim partners.

HKEPD has also agreed to host a quarterly webinar series to share information on emerging air quality modeling and measurement methods with ORD. They intend to use this series to identify potential joint research opportunities to advance implementation of these emerging technologies.
HKEPD has also agreed to collaborate with EPA OAR on regional air quality. EPA seeks to collaborate on further developing tools that will help EPA and HK EPD address air quality, such as air quality forecasting and cost and benefits tools, and share experience in integrating climate considerations into air quality management and planning.

[All following redactions are based on Exemption 5]

Administrator's Remarks (First Intervention)

- [redacted]
- [redacted]
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- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

Additional Background on other modes of transport and ECA:

Non Road Equipment:
EPA has adopted multiple tiers of emission standards for heavy-duty nonroad equipment. Most recently, we adopted a comprehensive national program to reduce emissions from nonroad diesel engines by integrating engine and fuel controls as a system to gain the greatest emission reductions. To meet these Tier 4 emission standards, engine manufacturers will produce new engines with advanced emission control technologies similar to those produced for highway trucks and buses. Through the use of these advanced technologies exhaust emissions from these engines will decrease by more than 90 percent. Because the emission control devices can be damaged by sulfur, we have also adopted requirements for in-use diesel fuel to decrease sulfur levels by more than 99 percent. The resulting Ultra Low Sulfur Diesel Fuel has a maximum sulfur concentration of 15 parts per million.

Aircraft:
In May, 2012, EPA adopted emission standards for aircraft gas turbine engines with rated thrusts greater than 26.7 kilonewtons. These engines are used primarily on commercial passenger and freight aircraft. The requirements were previously adopted by the International Civil Aviation Organization (ICAO). Included in the rule are two new tiers of more stringent emission standards for oxides of nitrogen (NOx). These are referred to as Tier 6 standards and Tier 8 standards. The Tier 6 standards become effective for newly-manufactured aircraft engines beginning in 2013.

ECA Info in terms of benefits achievable:
The North American ECA formally entered into force in August 2012, and became enforceable in August 2013.The first-phase fuel sulfur standard was effective in 2012 and the second phase begins in 2015. Beginning in 2016, NOx aftertreatment requirements become applicable. [Note: There is a current Russian-led proposal to delay the IMO Tier 3 NOx Standard for new engines planned for 2016].

The benefits that the North American ECA is estimated to produce (emissions, air quality, economic, and health) are relevant to inform Hong Kong authorities of the potential benefits that can be achieved by promoting a Perl river delta ECA.

U.S. estimates that in 2020, emissions from ships operating within the North American ECA are expected to be reduced annually by 320,000 tons for NOx, 90,000 tons for PM2.5, and 920,000 tons for SOx, which is 23 percent, 74 percent,

and 86 percent, respectively, below predicted levels absent the ECA. The emission reduction benefits of the ECA are significant, reaching all the way into the center of the United States (Nebraska). This is significant considering 50% of air emissions in Hong Kong are estimated to come from vessels.

In 2030, the ECA in combination with our Federal Locomotive and Marine engine and fuels standards will have combined benefits between $110 and $280 billion through reductions in human health impacts as follows:

- Between 13,000 and 32,000 PM-related premature deaths
- Between 220 and 980 ozone-related premature deaths
- About 1,500,000 work days lost
- About 10,000,000 minor restricted-activity days

The estimated costs of the of this combined emission reduction strategy are much smaller: $3.1 billion. This is also significant to Hong Kong and Guanzhou because of the large population density and Guanzhou's economic importance to manufacturing and export in southern China.